



## MANITOU

...fine, handcrafted,  
custom, aluminum  
mountain bikes and  
components...

*"Doug Bradbury's Manitou mountain bike is almost a watershed design. It does things so well and in such an innovative way, that it brings the design concept of other builders into question. In the future, when they speak of the legends in frame building, Doug Bradbury's Manitou will be more than a footnote."*

Mountain Bike Action January '88

*"The Manitou is the most carefully constructed, painstakingly built and artfully crafted mountain bike made."*

Mountain Bike Action July '89

*"This is the finest bicycle I have ever ridden: responsive, safe yet aggressive and very light. A bike to last a lifetime of riding."*

Mountain Biking United Kingdom January '90



# MANITOU MOUNTAIN BIKES

Thank you for inquiring about my custom Manitou bicycles.

I started building Manitou mountain bikes after realizing the ones on the market were not designed or constructed for true, hard off-road use. I have an extensive background in a wide range of motorcycle competition, which is done on the same kind of terrain bicycles are ridden over today. Consequently, I have designed the Manitou, incorporating ideas gleaned from years of riding motorcycles on difficult terrain at three times the speed.

I chose aluminum for its intrinsic dampening qualities, its ability to be used in large diameters, which minimizes frame flex, and to maintain its light weight capability.

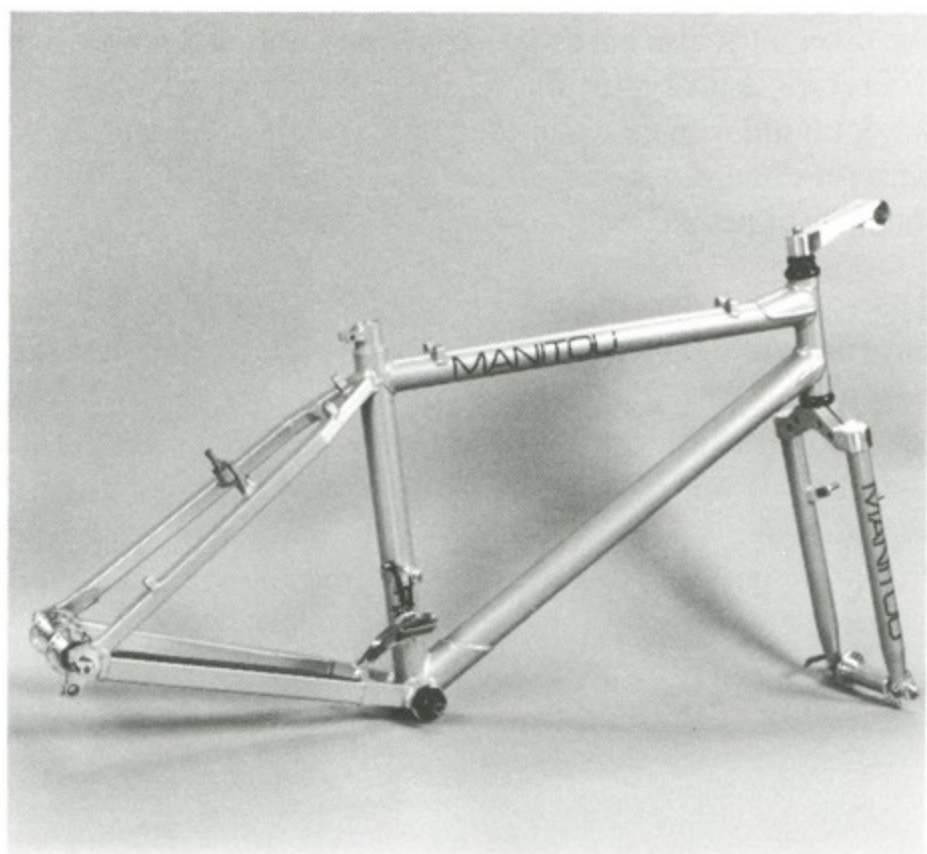
I build custom bicycles because a rider, on top of having to drive the bike, must also act as the suspension unit and power supply. Therefore, a bike must fit the physical dimensions of the rider. Also, I build with care and precision a range of handmade bikes with set dimensions and geometry which I have found to fit the majority of people.

I personally design and build all my bicycles and components. I am constantly improving my existing products and developing new ones. This, plus being a custom builder, ideally prevents many forms of mass production. My output is limited, but at the same time new designs are implemented instantly, not just in next year's model. I guarantee all Manitou components to the owner they were designed and built for; I purposely overbuild them to insure greater strength and longevity.

## FRAME SETS

My frames are constructed entirely of large diameter 6061 T-6 aluminum tubing. They are tig welded, heat-treated and returned to their full T-6 condition. Every frame is precision aligned and all machine work is completed after heat treatment. Each frame comes with gussets at the head tube and bottom bracket. All cable stops are machined aluminum and welded to the frame. The rear brake pivots (cantilever or U-brake) are located on the seat stays. Two large water bottle mounts are provided. Extra bottle mounts and rack mounts are available upon request.

My theory on frame geometry is to build an aggressive, responsive and, at the same time, very stable frame. The geometry I have



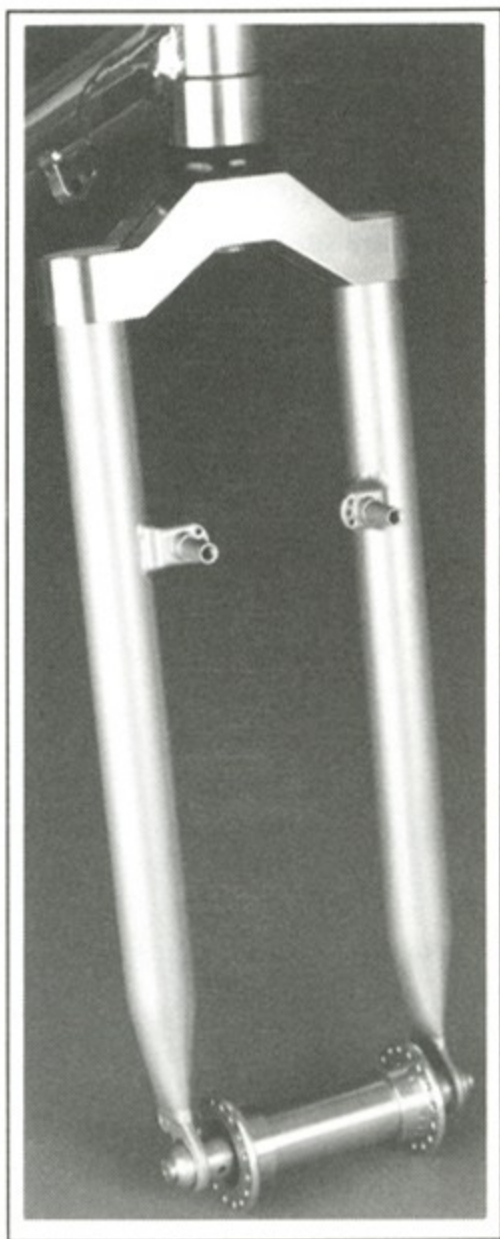
found which meets this requirement is as follows: 11-1/2" bottom bracket height, 16-3/8" chain stay length, 73° seat angle, 70-1/2° head angle, and a top tube length of 22-1/2" for a 18" frame, 23-1/4" for a 19" frame and 24" for a 20-1/2" frame. All these dimensions are subject to immediate update if and when I find a combination that works better. As I've mentioned before though, I am a custom bicycle builder and will build a frame to the dimensions and geometry you wish within certain physical boundaries.

My frames are designed with an asymmetrical rear triangle. This enables me to use a dishless rear wheel, accomplished by moving the right chain stay/seat stay outward 15mm. I manufacture sealed bearing Manitou hubs (32 or 36 hole) to fit the 145mm drop out spacing by moving the right spoke flange out 15mm, producing the dishless rear wheel. The benefits of the Manitou include resistance to lateral and torsional loads; the rim remains truer, and the stiffer rear wheel transfers power impulses to the ground more efficiently. Thus, a lighter wheel can be built and still maintain superior strength. The bottom bracket shell is extremely wide to place the bearings as far out on the spindle as possible and to eliminate bottom bracket flex. The wide bottom bracket matches the asymmetrical rear triangle for perfect chain alignment and will allow any combination of chain rings. The chain stays utilize 3/8" x 1" billet from the bottom bracket to a point where tire clearance is the most critical before flaring out to 1" x 1" square tubing. The tire clearance is 3-3/8" between chain stays at the widest part of the tire.

My Manitou frame sets include the frame, fork (115mm spacing), stem, Manitou hubs (32 or 36 hole hyperglide or thread on), front derailleur and bottom bracket. I also custom build Manitou frames with standard drop out dimensions of 100mm for the front wheel, 130mm rear wheel, and 68mm threaded bottom bracket.

# FORKS

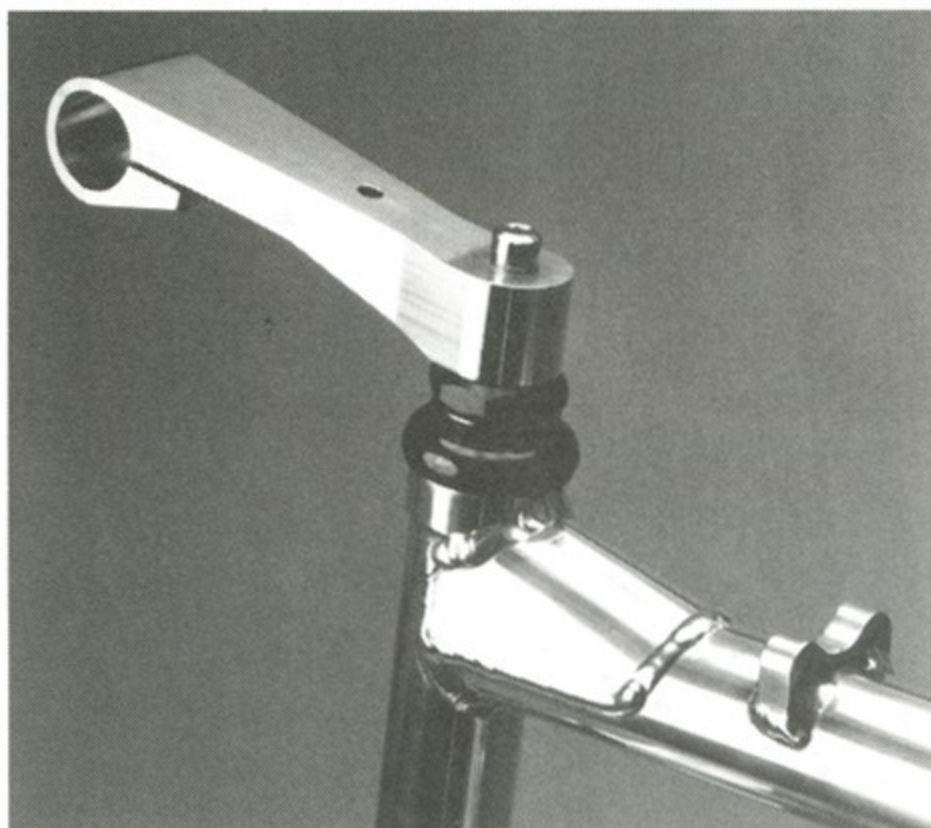
My Manitou forks are a composite design, consisting of straight, non-tapered 1-1/8" chromemolly fork blades, a billet aluminum gullwing crown, and a thick wall steerer tube. In using these three design elements, the forks resist torsional flex which substantially reduces wheel deflection and auto steer. These Manitou forks have standard 100mm drop out spacing and they accept standard head sets and stems. Either Shimano 3-hole cantilever or roller cam/U-brake bosses are supplied. The fork rake is 1-7/8." These forks resist flexing extremely well. They accentuate the inherent weakness of standard front wheels. In order to build a wheel which accepts the added loads and forces, the Manitou forks allow you to produce, I offer these forks with 115mm drop out spacing with the frame set and complete bikes. The Manitou hub spoke flanges are 15mm wider than standard spoke flanges. The increased spoke angle greatly enhances the strength and steering precision of the wheel. Again, a lighter wheel can be built and still maintain superior strength.



# STEMS

My Manitou stems are made of 7075 T-65 billet aluminum and 7075 T-65 billet aluminum steer tube insert. The bore for the handlebars is 1" diameter and accepts 1" bulge bars or 7/8" bars with shims. Two pinch bolts under the stem secure the bars. The stem acts as the front brake cable stop. Stem dimensions are always a compromise. The longer and lower they are the better they climb. The higher and shorter they are the better for downhill.

I have found that 120mm reach and 25.4mm rise is a good middle ground that is accentuated by excellent steering precision. These stem dimensions are what I have found work best along with a top tube length and head tube height that is fitted to your physical dimensions, riding position, and style.



## COMPLETE BIKES

Unlike many frame builders, I enjoy building complete bikes. Initial setup, road test, and fine tuning are crucial to the performance and reliability of the bike. This is something into which I put a lot of time and effort. It is also when I derive my greatest satisfaction, in knowing I have built the best complete bike possible.

I outfit my frame sets with top of the line components from a number of off-road component companies. Listed on the component sheet is what I currently offer. Component selection is subject to change when new products come on the market that I feel will improve the performance of the Manitou. The new products usually come with new prices, which are also subject to change. Being a custom bike builder means building to your specifications and this includes component selection. Prices for a complete Manitou are stated on the price sheet. Changes in geometry, dimensions, and component selection are quoted on an individual basis.

Please write or call if you have any questions or if you would like to order a Manitou bike and/or components. Again, thanks for your interest.

Doug Bradbury  
Manitou Mountain Bikes

4560 Canon Road  
Colorado Springs, CO  
80906  
(719) 634-1607  
Fax Available



## COMPONENT SELECTION

The following is a list of components that currently come standard on the handmade production Manitou. This is also a good list to use as a base when selecting components for a custom bike.

Bottom Bracket - Cook Bros. Racing

Fork - Manitou

Head Set - Specialized Pro Alloy

Stem - Manitou

Handlebar - Specialized Bulge Bar 5

Front Brake - Shimano XTII Cantilever

Rear Brake - Shimano XTII Cantilever

Brake Levers - Shimano XTII Two Finger

Saddle - Selle Italia Turbo

Seat Post - 352mm I.R.D.

Pedals - Shimano Comps. with clips

Crankset - Cook Bros. Racing

Chain Rings - 24-34-46

Freewheel - 12-28

Front Derailleur - Shimano XTII

Rear Derailleur - Shimano XTII 7 Speed

Shifters - Shimano XTII 7 Speed

Hubs - Manitou Sealed 32 or 36 Hole

Spokes - Wheelsmith 14-15-14 or 15-16-15 (Alloy Nipples)

Rims - Specialized X23

Tires - Specialized 1.9 Kevlar Extreme

Grips - Grab on Pyramid

Water Bottle Cage - Specialized Mountain Cage (2)

# ORDER FORM

To order, fill out this form and mail to: Manitou Mountain Bikes, 4560 Canon Road, Colorado Springs, Colorado 80906. If you have any questions, please call 719-634-1607. Thanks.

Ship to: Name \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Zip \_\_\_\_\_ Phone # \_\_\_\_\_

Stem \_\_\_\_\_  
Forks \_\_\_\_\_ brake mount (cantilever or U-brakes) \_\_\_\_\_  
type of headset used \_\_\_\_\_ measurement  
of frame head tube between the headset \_\_\_\_\_"

Frame Set \_\_\_\_\_ production 18" \_\_\_\_\_ 19" \_\_\_\_\_ 20-1/2" \_\_\_\_\_  
Custom \_\_\_\_\_ (please fill out measurement requirements below)

Complete Bike \_\_\_\_\_ production 18" \_\_\_\_\_ 19" \_\_\_\_\_ 20-1/2" \_\_\_\_\_  
Custom \_\_\_\_\_ (fill out below)

The following body measurements allow me to build proper frame size and dimensions, assuring a perfect fit:

Overall Height \_\_\_\_' \_\_\_\_" Inseam (with riding shoes) \_\_\_\_" Arm  
Length from Arm Pit to First Knuckle \_\_\_\_" Weight \_\_\_\_ lbs. A  
brief word on the type of riding you do \_\_\_\_\_  
\_\_\_\_\_

Head Angle \_\_\_\_° Seat Angle \_\_\_\_° Bottom Bracket Height \_\_\_\_"  
Type of Brakes \_\_\_\_\_ Rack Mounts \_\_\_\_ No. of Water  
Bottles \_\_\_\_ Additional Comments: \_\_\_\_\_  
\_\_\_\_\_

I will call you to confirm all specifications and to determine component selection before I begin work on your Manitou.

TOTAL AMOUNT INCLUDED \$ \_\_\_\_\_

# PRICE SHEET

Stem \$95

Fork \$195

Frame Set \$1,400

Complete Handmade Production Bike \$2,450

Custom frame sets and complete custom bikes are quoted on an individual basis.

Stem and forks are paid in full at time of order.

Frame sets and complete bikes require half down and balance upon completion.

Prices subject to change.

All items shipped UPS. Add \$5.00 shipping for stems and \$8.00 for forks. Shipping for frame sets and complete bikes varies according to weight and shipping distance and is added to the balance.

## MANITOU SUSPENSION SYSTEM

Available mid-summer 1990

Some interesting specs:

- doesn't change head angle
- doesn't change bike geometry
- absorbs shock, not momentum
- no oil, no air-low maintenance
- multiple settings
- ultimate for downhill
- great for cross-country
- improves braking
- superior lateral control
- and steering

Price not yet determined, but  
competitive with Rock Shox

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# MANITOU MOUNTAIN BIKES, INC.

4560 CANON RD. COLORADO SPRINGS, CO 80906

(719) 634-1607

USA

FAX AVAILABLE

TO: